

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 June 2004 (17.06.2004)

PCT

(10) International Publication Number
WO 2004/050170 A3

(51) International Patent Classification⁷: **G01T 1/24**

HARPER, Brent [US/US]; 20 Winnie Avenue, Prairie du Sac, WI 53578 (US).

(21) International Application Number:
PCT/US2003/038168

(74) Agent: **BAXTER, William, K.**; Godfrey & Kahn, S.C., 780 N. Water Street, Milwaukee, WI 53202 (US).

(22) International Filing Date:
28 November 2003 (28.11.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/429,637 27 November 2002 (27.11.2002) US

(71) Applicant (*for all designated States except US*): **TO-MOTHERAPY INCORPORATED** [US/US]; 1240 Deming Way, Madison, WI 53717-1954 (US).

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

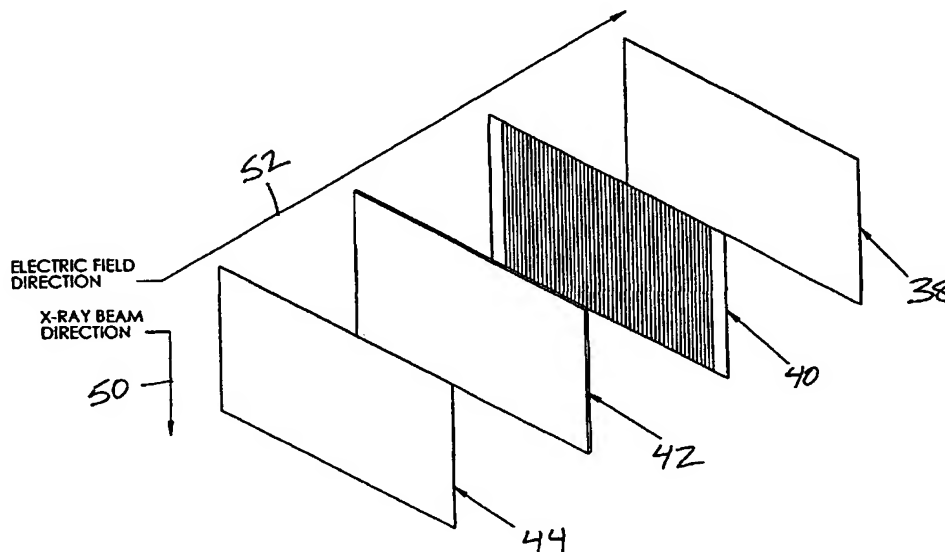
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **FANG, Guang, Y.** [US/US]; 2 Naylor Circle, Madison, WI 53719 (US). **MACKIE, Thomas, R.** [US/US]; 7763 Solstice Court, Verona, WI 53593 (US). **SPENCE, David, A.** [US/US]; W28776 Vernon Drive, Hartland, WI 53029 (US).

Published:
— with international search report

[Continued on next page]

(54) Title: AMORPHOUS SELENIUM DETECTOR FOR TOMOTHERAPY AND OTHER IMAGE-GUIDED RADIOTHERAPY SYSTEMS



(57) Abstract: A detector for use in medical and industrial applications for detecting high energy radiation, especially for use in tomotherapy and other image-guided radiotherapy systems. The detector is preferably housed in an enclosure. A plurality of detector elements are installed within the enclosure. The detector elements preferably include a substrate (38), a readout electrode layer (40) deposited on at least one surface of the substrate, an amorphous selenium layer (42) deposited on at least one surface of the readout electrode layer, and a high voltage electrode layer (44) deposited on at least one surface of the amorphous selenium layer.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
8 July 2004